

REMARKS

Reconsideration of this application, as amended, is requested.

New corrected drawings in compliance with 37 CFR 1.121(d) have been sent under separate cover. Figures 5, 6 and 7 have been canceled without prejudice. Figure 8 has been renumber as Figure 5.

The specification has been amended to correct informal language and to be consistent with the corrected drawings. The amendments to the specification do not add new matter to the specification.

Applicant's wheel skate has a frame assembly connected to a foot pedal lever 15 operable to contract telescopically connected first and second frame member 12 and 13 together. Lever 15 is mounted on ears 49 and 51 joined to the sides of first frame member 12. A plate 52 having a forked lower end 53 is pivotally connected to the lower portion of lever 15. Lower end 53 has fingers 54 and 56 that extend into holes 41 in the top of the second frame member 13, as seen in Figure 2. When lever 15 is moved from a first upwardly inclined position to a second generally horizontal position adjacent frame members 12 and 13, plate 52 moves the second frame member into the first frame member. This movement causes pin 47 locking frame members 12 and 13 to engage flange 46 and move the pin upwardly, as shown by arrow 58 in Figure 2, out of hole 41 until a following hole is aligned with pin 47. Upon alignment with the following hole, the pin moves downwardly as shown by arrow 59 in Figure 2 to relock frame members 12 and 13.

Claim 1 has been amended to more particularly define applicant's apparatus as having a lever connected to the first frame member. The lever has a lower end pivotally connected to a plate member having one or more fingers engaging the second frame member to move the second frame member into the first frame member. An upright pin extending through aligned holes in the frame members engages a flange between the longitudinally spaced holes in the second frame

member and moves the pin upwardly to allow contraction of the frame members. When the following hole is aligned with the pin the pin moves downwardly into the hole to relock the frame members.

Reconsideration of the wheel and dolly devices disclosed by *Coccaro '803* and *Coccaro '605* and the jack device disclosed by *Cameron* relative to amended Claim 1 is requested.

Coccaro in U.S. Patent No. 4,854,803 discloses an apparatus for jacking and dollying a vehicle wheel assembly having telescoping body sections 12 to which orthogonally extending arms 14 and 16 are attached. Arms 14 and 16 each carry a single roller assembly 18 and 20. The roller assemblies have single cylindrical rollers 90 and 92 rotatably mounted on arms 14 and 16 with bushings 91, 93, 95 and 97. The mating surfaces of the bushings and rollers are susceptible to wear under heavy load. When roller assemblies 18 and 20 are driven into the tire the tire rides over the roller assemblies. *Col. 7, lines 67-68; Col. 8, lines 1-2*. It is conceivable that the tire could roll over one or both of the roller assemblies and off the apparatus. Arms 14 and 16 have to be disassembled to permit removal of roller elements 90 and 92 for repair or replacement.

Col. 10, lines 21-24.

Actuator 26 includes a double pawl, bi-directional lever ratchet mechanism having a spring loaded lever 102 pivotally mounted to body section 36, a drive pawl 132 and a brace pawl 134 mount on the lever. A rack 136 has grooves or notches 138 for receiving the drive pawl and brace pawl. Drive pawl 132 is a bar shaped member having a contoured drive end 148 for engaging notches 138. Drive pawl 132 is rotationally mounted axially displaced from pivot shaft 124 on lever housing 114 and biased toward rack 136 by a circular spring at pin 154. Brace pawl 134 is a bar shaped member having a brace end 142 for engaging notches 138 and rotationally mounted on pivot shaft 124 of lever 112.

Actuator 26 also includes means 110 for controlling the direction of the actuator having a

first setting to allow actuator to lift the wheel and a second setting to allow the actuator to lower the wheel from a raised position. The means for controlling actuator direction is a resilient plate 156 fixed to the top of lever housing 114. Plate 156 is a rectangular piece having end 158 fixed to base section 162 of the housing. Plate 156 removably overlays slot 119 of housing 114 so as to engage ends 144 and 150 of brace pawl 134 and drive pawl 132. Plate 156 is deflected with a cam 174 on crank 170 away from end 144 of brace pawl 134 to establish a stop for end 150 to define the lift orientation for drive pawl 132. Moving cam 174 away from plate 156 permits plate 156 to bear against end 144 of brace pawl 134 and counteract the bias of spring 127 and end 142 of brace pawl 134 to disengage rack 136. Plate 156 also bears against end 150 of drive pawl 132 to define the lowering orientation.

The load bearing elements and surfaces of the *Coccaro '803* apparatus are susceptible to wear, particularly notches 138 and resilient plate 156, causing inadvertent apparatus failure.

There is no disclosure or suggestion in *Coccaro '803* of roller assemblies comprising a plurality of rollers mounted on pivotally mounted brackets whereby one of the rollers is located inwardly and downwardly from the arm as claimed. Further, *Coccaro '803* does not show or suggest the claimed lever having a lower plate with fingers extending into openings and engaging a frame member to contract frame members and pin upwardly and downwardly moveable through the frame members to lock and relock the position of the frame members.

The mechanical jack disclosed by *Cameron* in U.S. Patent No. 3,788,604 delivers a vertical lift to a camper structure and is nonanalogous art. Further, the jack has a first tube 2 engaging the ground and a second tube 5 located in the first tube. The second tube 5 has a toothed wheel for engagement on apertures 4 to limit rotation of the first tube relative to the second tube. The jack also has a control device having latching means on the second tube 5 preventing first tube 2 from sliding into the second tube. A lever on the second tube has an

actuating pawl pivoted on the lever. The pawl sequentially engages apertures 4 to cause vertical extension of the jack. Modifying the *Coccaro '803* apparatus to include latching means as taught by *Cameron* would not predicate the claimed vehicle maneuvering apparatus having a moveable upright pin to lock successive contracted positions of the frame members.

The roller assemblies of the *Coccaro '605* apparatus as shown in U.S. Patent No. 4,690,605 are mounted on convex arcuate shaped housings 94 and 116 having an axis parallel to the axis of the arm member. *Column 13, lines 45-47*. Roller elements 106 and 128 are journaled in bore holes in the housings with restricted rotational movement. One having ordinary skill in the art at the time of the invention was made would have not modified the *Coccaro '803* apparatus to include the limited rotational roller assemblies as shown in *Coccaro '605*.

The allowance of Claim 1 is requested.

Claims 2 to 11 and 13 to 14 depend upon Claim 1.

Claims 4 and 11 have been amended to correct informal language as suggested by the Examiner to overcome the indefiniteness rejection under 35 USC 112.

Claims 13 has been amended to more particularly define the pin as being accommodated by an upright sleeve. The pin has a tab that is accommodated by a slot open to the top of the sleeve when the pin is in the lock position.

The allowance of Claims 2 to 11 and 13 to 14 along with Claim 1 is requested.

Independent Claim 16 has been reviewed and amended to further define the maneuvering apparatus as having a blocking member pivotally connected to the first frame member and moveable between first and second positions to engage and disengage the lever for lift and lowering functions. The lever also has a lower end pivotally connected to a plate having one or more fingers engageable with the second frame member to move the second frame member toward the first frame member. A pin extends through aligned openings in the first and second

frame members to lock the position of the frame members. The pin is engageable with a flange located between the holes in the second frame member to force the pin upwardly and allow contraction of the frame members. Pin moves downwardly into an adjacent hole in the second frame upon alignment with the pin to relock the frame members.

The comments relative to *Coccaro '803*, *Cameron* and *Coccaro '605*, *supra*, are applicable to Claim 16.

The prior art of record, including *Coccaro '803*, *Cameron* and *Coccaro '605*, fail to disclose or suggest a vehicle maneuvering apparatus as defined in Claim 16. Allowance of Claim 16 is requested.

Applicant requests the allowance of dependant Claims 17, 18 and 20 along with Claim 16. These claims further define the spring members located between the telescoping surface of the frame members and the sleeve accommodating the pin.

Applicant's wheel skate is a commercially successful product. Applicant's enclosed product specifications, and operating instructions show and describe the commercial wheel skate apparatus disclosed in this application. This apparatus has fulfilled a long-felt need to improve car dollying.

Under 35 USC 103 commercial success of an invention must be considered in resolving the obviousness of the claimed exercise machine.

Secondary considerations, such as long-felt need, commercial success, and initial expressions of disbelief by experts should be considered in every case for whatever probative value they have and are not limited to cases where patentability is a "close" question. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983).

As the Federal Circuit Court has explained:

[O]bjective evidence such as commercial success, failure of others, long-felt need and unexpected results must be considered before a conclusion on obviousness is reached. * *

* Indeed, as then Chief Judge Markey said in *Stratoflex, Inc. v. Aeroquip Corp.* . . .

"evidence of secondary considerations may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art is not." In spite of the importance that the secondary considerations of commercial success, long-felt need, and failure of others played in the consideration of both the PTO and trial court, the infringer conspicuously fails to address them.

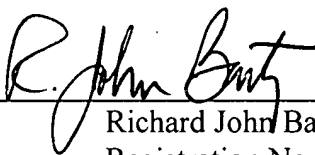
Minnesota Mining & Manufacturing, Co. v. Johnson & Johnson Orthopaedics, Inc., 976 F.2d

1559, 24 USPQ2d 1321 (Fed. Cir. 1992).

In view of the above remarks, Applicant requests the allowance of Claims 1 to 20.

Respectfully submitted,

WANG GANG

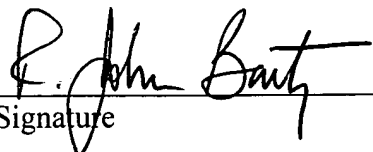
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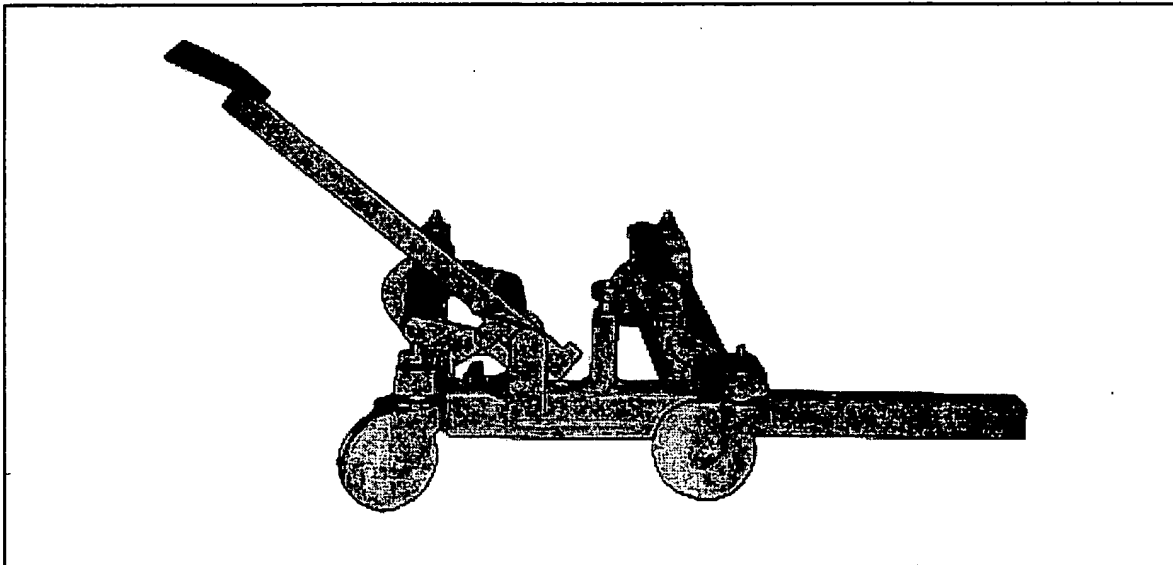
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CENTRAL PNEUMATIC®

RATCHETING CAR DOLLY – 2 PIECE

Model 47990

ASSEMBLY AND OPERATING INSTRUCTIONS



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Visit our Web site at: <http://www.harborfreight.com>

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For technical questions please call 1-800-444-3353.

PRODUCT SPECIFICATIONS

Item	Description
Maximum Weight Capacity	1,200 Pounds
Maximum Tire Width Capacity	9"
Maximum Tire Diameter Capacity	29" (360 Degrees)
Adjustable	Yes. (From Small To Large)
Maximum Open Frame Position	25" L x 25" W
Foot Pedal Travel	6-1/2" H Closed / 16-1/2" H Opened
Foot Pedal Arm	17-5/16" L x 1-1/8" H x 3/8" W
Foot Pedal	4" L x 3-1/8" W x 1/8" Thick
Overall Dimensions	20-3/16" L x 4" W x 1-1/8" H
Weight	46.30 Pounds

PRODUCT OVERVIEW

Car Dollies are designed for use as a *pair* to move a vehicle in confined spaces such as auto showrooms, garages, and body shops. This package includes two Car Dollies. The Car Dollies should only be attached to either the two front or two rear wheels in order to swing one end of the vehicle around for positioning.

SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

- 1. KEEP WORK AREA CLEAN AND DRY.** Cluttered, damp, or wet work areas invite injuries.
- 2. KEEP CHILDREN AWAY FROM WORK AREA.** Do not allow children to handle this product.

3. **STORE IDLE EQUIPMENT.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment, and keep out of reach of children.
4. **DO NOT USE THIS PRODUCT IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.
5. **USE EYE AND HAND PROTECTION.** Wear ANSI approved safety impact eye goggles and heavy-duty work gloves when using this product. ANSI approved safety impact eye goggles and heavy-duty work gloves are available from Harbor Freight Tools.
6. **DRESS SAFELY.** Do not wear loose clothing or jewelry, as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts. If wearing a long-sleeve shirt, roll sleeves up above elbows.
7. **DO NOT OVERREACH.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.
8. **INDUSTRIAL APPLICATIONS MUST FOLLOW OSHA REQUIREMENT.**
9. **STAY ALERT.** Watch what you are doing at all times. Use common sense. Do not use this product when you are tired or distracted from the job at hand.
10. **CHECK FOR DAMAGED PARTS.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
11. **REPLACEMENT PARTS AND ACCESSORIES:** When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.
12. **MAINTAIN THIS PRODUCT WITH CARE.** Keep this product clean and dry for better and safer performance.
13. **SERVICE AND MAINTENANCE:** For your safety, service and maintenance should be performed regularly by a qualified technician.

14. **USE THE RIGHT TOOL FOR THE JOB.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool, and do not use this tool for a purpose for which it was not intended.
15. **WARNING:** The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors, which cannot be built into this product, but must be supplied by the operator.

SPECIFIC PRODUCT WARNINGS AND PRECAUTIONS

1. **DO NOT EXCEED THE MAXIMUM LIFT CAPACITY FOR THIS PRODUCT (1,200 POUNDS PER CAR DOLLY).** Overloading a Car Dolly can cause personal injury and/or property damage.
2. **DO NOT USE THE CAR DOLLIES ON ANY ASPHALT SURFACE.** Make sure this equipment is used on a dry, oil/grease free, flat, level, **CONCRETE** surface capable of supporting the weight of the Car Dollies, the vehicle being lifted, and any additional tools and equipment. The concrete floor should have a minimum thickness of 5". The concrete must have a minimum strength of 4,000 PSI, and should be aged at least 30 days prior to use. Do not use the Car Dollies on concrete expansion seams or on cracked, defective concrete.
3. **ALWAYS EXAMINE THE CAR DOLLIES FOR STRUCTURAL CRACKS, BENDS, AND ANY OTHER CONDITION THAT MAY AFFECT THE SAFE OPERATION OF THE CAR DOLLIES.** Do not use the Car Dollies even if minor damage appears.
4. **MAINTAIN A SAFE WORKING ENVIRONMENT.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris.
5. **THE CAR DOLLIES MUST BE USED IN PAIRS AT EITHER THE FRONT OR REAR OF THE VEHICLE. THE CAR DOLLIES SHOULD NEVER BE USED DIAGONALLY.**

6. **KEEP HANDS, FEET, AND BODY CLEAR OF THE MOVING PARTS OF THE CAR DOLLIES WHEN IN USE.**
7. **MAKE SURE THERE ARE NO PASSENGERS IN THE VEHICLE BEING MOVED.** Ensure that all non-essential people keep a safe distance while the vehicle is being moved.
8. **DO NOT USE THE CAR DOLLIES TO LIFT OR SUPPORT A VEHICLE IN ORDER TO PERFORM WORK UNDER THE VEHICLE.**
9. **DO NOT LEAVE THE VEHICLE UNATTENDED WHILE IT IS RAISED ON THE CAR DOLLIES.**
10. **ALWAYS ENLIST SUFFICIENT MANPOWER TO MOVE THE VEHICLE SAFELY.**
11. **CHECK TO MAKE SURE THE CAR DOLLIES ARE FREE TO MOVE, AND THAT THERE ARE NO OBSTRUCTIONS IN THE WORK AREA.**
12. **CAUTION: USE THE CAR DOLLIES FOR MOVING VEHICLES IN *INTERIOR* SITUATIONS. THE CAR DOLLIES ARE NOT DESIGNED FOR USE OUTDOORS.**
13. **NEVER START, SIT OR DRIVE A VEHICLE WHILE IT IS RAISED ON THE CAR DOLLIES.**
14. **USE EXTREME CAUTION WHEN APPLYING OR RELEASING A LOAD.**
Never allow the load to suddenly release. Slowly and carefully apply and release the load.
15. **MAKE SURE TO READ AND UNDERSTAND ALL INSTRUCTIONS AND SAFETY PRECAUTIONS AS OUTLINED IN THE MANUFACTURER'S MANUAL FOR THE VEHICLE YOU ARE RAISING.**
16. **DO NOT USE THE CAR DOLLY'S AS A PERMANENT STAND FOR A VEHICLE.** Use the Car Dollies only when moving a vehicle. Then, immediately remove the Car Dollies from the vehicle.
17. **VEHICLE'S ENGINE MUST BE TURNED OFF AND PARKING BRAKE MUST BE SET WHEN RAISING OR LOWERING THE VEHICLE, AND WHENEVER THE VEHICLE IS RESTING ON THE DOLLIES.**

UNPACKING

When unpacking, check to make sure all the parts shown on the **Parts List** (page 9) are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

OPERATING INSTRUCTIONS

NOTE: For additional information regarding the parts mentioned in the following instructions, refer to the **Assembly Diagram (page 10)**.

To Position The Car Dolly:

1. Disengage the Release Lever (part #6) by moving it as far to the left as it will go. Then, lift the Lock Knob (part #12) and turn it counterclockwise so that it is no longer engaged in the slot. (See Figure A.)
2. Take hold of the Sliding Frame (part #1), and Locking Frame (part #27), and expand the Car Dolly until it is wide enough to slide the Rollers (part #19) on either side of the tire. Make sure both sets of Rollers are centered on the tire. Then, take hold of the Sliding Frame and Locking Frame and collapse the Car Dolly until each pair of Rollers contact the tire. (See Figure A.)

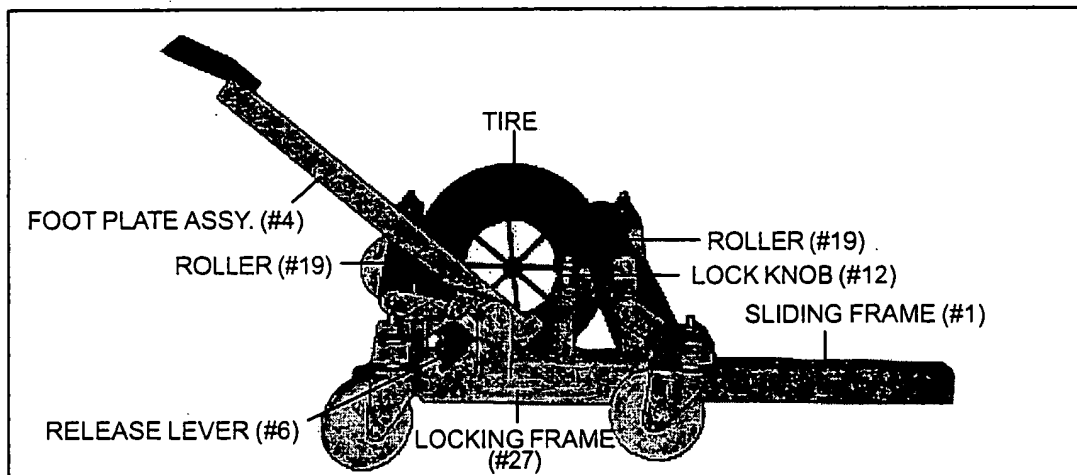
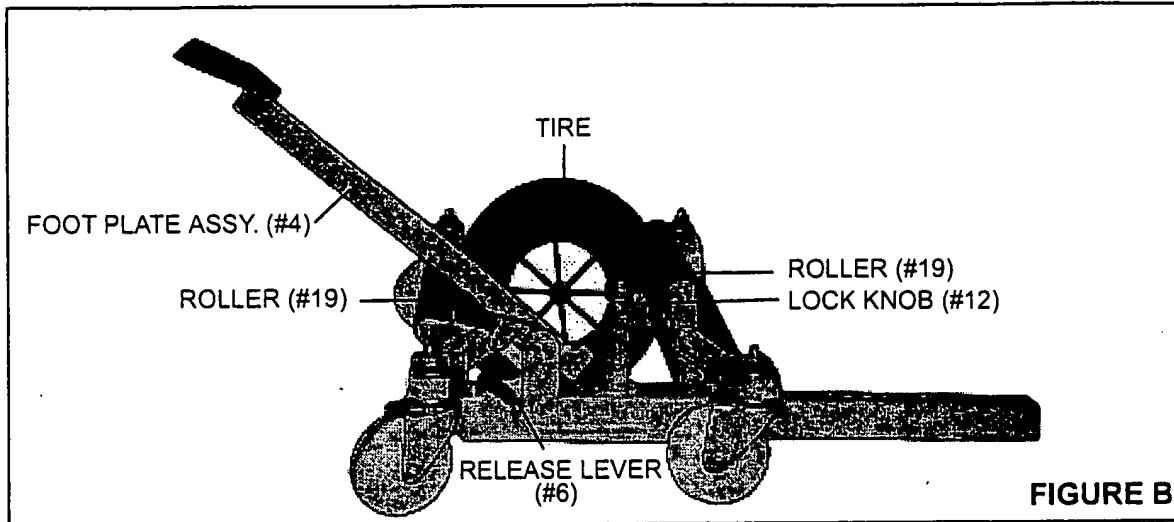


FIGURE A

To Raise The Tire: Make sure to block the ties not being raised.

1. Turn the Release Lever (part #6) as far to the right as it will go. (See Figure B, next page.)
2. Make sure the Lock Knob (part #12) is no longer engaged in the slot. (See Figure B, next page.)
3. Pump down of Foot Plate Assy. (#4) to begin raising the tire. Make sure to allow the Foot Plate Assy. to return to full up position before pumping down on it again. Continue pumping Foot Plate Assy. until tire is approximately 1 inch off the floor surface. (See Figure B)

4. Raise the other tire off the surface of the floor with the other Car Dolly.
CAUTION: Be prepared for any movement the vehicle may make when the second tire comes clear of the floor surface.



To Move The Vehicle:

1. Take away blocks from back tires. Make sure you have sufficient manpower to move and control the vehicle.
2. Keep well away from any sloping floor areas and entry ramps.
3. When positioning a vehicle toward a wall, pillar, etc., make sure no person or object is situated between the vehicle and the wall, pillar, etcetera.
4. Sufficient space should be left between the side of the vehicle and an adjacent wall or feature to allow the Car Dollies to be removed sideways from the tires.

To Lower The Tire:

1. Disengage the Release Lever (part #6) by moving it as far to the left as it will go. Then, lift the Lock Knob (part #12) and turn it clockwise until it drops into the slot. (See Figure C, next page.)
2. Press the Foot Plate Assembly (part #4) all the way down, and allow it to automatically return all the way up, to begin lowering the tire to the floor surface. Each downward travel of the Foot Plate Assembly will raise the Lock Knob (part #12), while the Release Lever (part #6) acts as a stop to lock the Car Dolly in the next hole down. Continue to operate the Foot Plate Assembly until the tire is completely resting on the floor surface and no longer exerting pressure on the Rollers (part #19). (See Figure C, next page.)

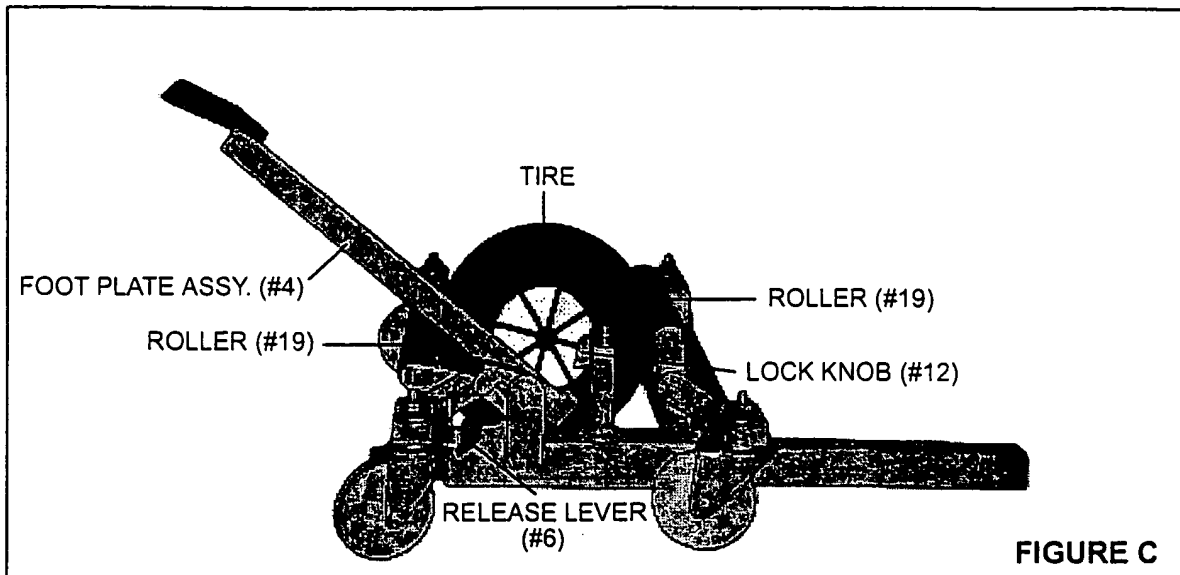


FIGURE C

To Remove The Car Dolly From The Tire:

1. Make sure the Release Lever (part #6) is as far to the left as it will go. Then, lift the Lock Knob (part #12) and turn it counterclockwise so that it is no longer engaged in the slot. (See Figure A, page 6.)
2. Take hold of the Sliding Frame (part #1), and Locking Frame (part #27), and expand the Car Dolly until it is wide enough to slide the Rollers (part #19) out and away from the sides of the tire. Then, pull the Car Dolly out and away from the tire. (See Figure A, page 6.)

INSPECTION, MAINTENANCE, AND CLEANING

1. **BEFORE EACH USE**, inspect the general condition of the Car Dollies. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, and any other condition that may affect their safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. **Do not use damaged equipment.**
2. **PERIODICALLY**, use a premium quality, lightweight grease to lubricate all moving parts.
3. When necessary, wipe with a damp cloth, using a mild detergent or mild solvent.
4. When storing, keep the Car Dollies clean and dry.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST

Part #	Description	Part #	Description
1	Sliding Frame	16	Lock Pin
2	Support Plate	17	Spring Pin
3	Retaining Ring	18	Spring Plate
4	Foot Plate Assembly	19	Roller
5	Bolt (M12 x 80)	20	Sleeve
6	Release Lever	21	Clamping Rod
7	Pivot Pin	22	Lock Nut (M10)
8	Lock Nut (M6)	23	Bolt (M12 x 35)
9	Spring	24	Sleeve
10	Bolt (M6 x 10)	25	Connector Plate
11	Washer (M6)	26	Wheel Assembly
12	Lock Knob	27	Locking Frame
13	Spring Clip	28	Washer (M12)
14	Sleeve	29	Lock Nut (M12)
15	Spring		

ASSEMBLY DIAGRAM

